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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/799,057      | 03/12/2004  | Win-Chung Lee        | AD6996 USNA         | 6733             |

23906 7590 09/22/2006

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| EXAMINER |
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WOODWARD, ANA LUCRECIA

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1711

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                            |  |
|------------------------------|-------------------------------|----------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/799,057 | Applicant(s)<br>LEE ET AL. |  |
|                              | Examiner<br>Ana L. Woodward   | Art Unit<br>1711           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 9/20/2004, 7/24/2006, 8/14/2006
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 10-19, 21-23 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 20, 24-33 and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/20/04, 7/24/06, 8/14/06</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I comprising tougheners comprising polyvinyl butyral in the reply filed on July 24, 2006 is acknowledged. The traversal is on the ground(s) that if claims 1 and 2 are allowed then the claims dependent thereon should be rejoined and that amended claim 21 should be rejoined. This is not found persuasive because there is nothing on the record to show that the grouped inventions are obvious variants.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 10-19, 21-23 and 34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on July 24, 2006.

### ***Claim Rejections - 35 USC § 112***

3. Claims 2-9, 20, 24, 26-33 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 35, it is unclear whether the recited amounts are based upon total compositional weight or based solely on the sum total of components (a)-(d).

In claims 2 and 35, it is unclear as to what is meant by "free-flowing".

In claim 3, as recited, it is unclear as to whether said "polymers having.... functionality" refer to the polyvinyl butyral.

In claim 27, the Markush group format is indefinite in its use of "or".

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In claim 29, "ethylene/n-butyl" is not understood.

In claim 32, it is not understood as to what is meant by "in the bulk of the composition".

***Claim Rejections - 35 USC § 102/103***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 9 and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 52-89141.

JP '141 discloses adhesives and articles therefrom prepared by dispersing polyamide, reading on the corresponding component of the present claims, into a solution comprising epoxy silane, reading on the presently claimed silane compound, and polyvinylbutyral resin, reading on the presently claimed other polymer.

The disclosure of the reference meets the requirements of the present claims in terms of the types of materials added. Given the chemical similarities between the reference composition and that presently claimed, it is reasonable to presume that the former would meet all properties governing the latter. The onus is shifted to applicants to establish that the product of the present claims is not the same as or obvious from that set forth by the reference.

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7. Claims 1, 9, 20 and 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 4,174,358 (Epstein).

Epstein discloses blends comprising polyamide, reading on the corresponding component of the present claims, a toughener, reading on the presently claimed other polymer and a silane coupling agent, reading on the presently claimed silane compound. See, e.g., example 163, etc.

The disclosure of the reference meets the requirements of the present claims in terms of the types of materials added. Given the chemical similarities between the reference composition and that presently claimed, it is reasonable to presume that the former would meet all properties governing the latter. The onus is shifted to applicants to establish that the product of the present claims is not the same as or obvious from that set forth by the reference.

***Claim Rejections - 35 USC § 103***

8. Claims 1-9, 20, 24-33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/12356 in view of U.S. 3,419,517 (Hedrick et al).

WO '356 discloses a composition comprising polyamide and a blend of modified polyvinylbutyral (reaction product of polyvinylbutyral and a polymer having anhydride or acid functional groups) with at least one other non-reactive polymer, e.g., polypropylene. See, e.g., examples 57-64, 86-97 etc.

In essence, the disclosure of WO '356 differs from the presently claimed invention in not expressly disclosing the use of a silane coupling compound and a filler. In this regard, attention is directed to the teachings of Hedrick et al of incorporating fillers and silane coupling agents to polyamide compositions for the purpose of improving the mechanical properties thereof. Accordingly, it would have been obvious to one having ordinary skill in the art to have further

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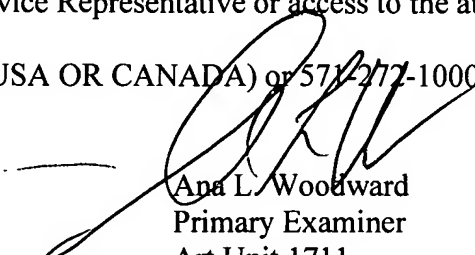
incorporated a filler and a silane coupling agent into the composition of WO '356 for their expected additive effect. Absent evidence of unusual or unexpected results relative to the use of the silane coupling agent and filler components, no patentability can be seen in the presently claimed subject matter.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ana L. Woodward  
Primary Examiner  
Art Unit 1711

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